Plants of Tribal Importance from Rajasthan

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Rajasthan is one of the largest states of the Indian Union having an area of 3,42,274 sq kms. Many tribes are scattered in different parts of the state. The main tribes of the state are Bhil, Garasia, Damor, Kathodi and Meena. Living close to nature, these tribals have acquired knowledge about the use of wild flora most of which are not known to the outside world. This rich knowledge system if subjected to scientific scrutiny could benefit the humankind in many ways. The inroads of modernization are presently posing imminent danger for this rich and varied expertise and wisdom of ages and it is likely that this will be lost to the humankind for all times to come. The habitats where the tribal and hill communities lived and the environment in which the folklore evolved on the uses of wild plants are fast disappearing on account of the interference of outsiders. In Rajasthan considerable work has been done on ethnobotany. The notable contributions are those of Bhandari (1974), Sebastian and Bhandari (1984, 88, 90), Singh and Pandey (1980, 96); Joshi (1982, 87, 91, 93, 95); Katewa and Arora (1997); Katewa and Guria (1997); Katewa and Sharma (1998) and Katewa and Chaudhary (2000).

An ethnobotanical survey was conducted repeatedly during 1995-2000 in different seasons and areas. The local informants were medicine men, men and women working in the field, village headman and priests People mostly above the age of 60 have accurate information regarding their traditions. Participating in their feasts, festivals other social events *etc.*; was of great use in collecting information on plants and observing how they are used. Ethnobotanical investigation has led to the documentation of wild plants used by trial for meeting their multifarious requirements. Application of most of the plants recorded in the present study are either lesser known or hitherto unknown to the outside world.

The present study records use of 73 wild growing plants as food and medicine by the tribals of Rajasthan (Table 1). Tribals have a traditionally self-managed system of folk medicine. They have perfected simple but effective remedies to treat various ailments. Recent changes brought about in tribal attitude due to habitat displacement; deforestation *etc.* have led to the decline and even disappearance of this rich knowledge system. Many wild plants used in the traditional medicines of

Table 1. Ethno-food plants of Rajasthan

Botanical name	Local name	Plant part used	Uses
Amaranthus gangeticus	Kangni	Seeds	Seeds are cooked like rice and are relished by the tribals.
Amorphophallus bulbifer	Jangli suran	Tubers	As vegetable.
Annona squamosa	Sitaphal	Fruits	Ripe fruits are eaten raw by the tribals.
Asparagus racemosus	Satavar	Tubers	Tuberous roots are eaten raw for vitality.
Brachiaria ramosa	Salki	Grain	Grains are eaten during famines.
Capparis decidua	Ker	Fruits	Unripe fruits are used as vegetable. Ripe fruits are eaten raw. Unripe fruits are also pickled.
Ceropegia bulbosa	Khadula	Leaves and Tubers	Tubers are eaten raw for vitality and are considered as refrigerant whereas leaves are cooked as vegetable.
Chlorophytum tuberosum	Safed Musli	Tubers	Tubers are eaten raw for vitality and are also used in various preparations.
Citrus medica	Bijaura	Fruits	Ripe fruits are edible. They are sweet refrigerant, digestive and anthelminthic.
Coix lacryma-jobi	Garelo	Grains	Grains are eaten after boiling. Grains of this grass are mixed with the grains of *Zea mays* and are also used for making porridge.
Cordia dichotoma	Gunda	Fruits	Fruits are edible.
Dioscorea bulbifera	Varaikand	Tubers	Tubers are edible.
Echinochloa crusgalli	Batda/Batti	Grains	The grains are eaten mostly by poorer classes.
Eleusine coracana	Maduo/Mall	Grains	Grains are eaten largely by tribals and the plant is used for making country liquor. Tribals of South Rajasthan take the crop of this grass and grains are eaten during summer months.

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Botanical name	Local name	Plant part used	Uses
Ensete superbum	Jungli Kela	Fruits	Fruits are palatable. Form shaft, leaf sheaths are removed and then it is made into pieces (Chaun), these are then chewed. Flower buds are cooked as vegetable.
Ficus bengalensis	Vadlo/Bad	Receptacles	Fresh receptacles are eaten raw. Dried receptacle powder mixed with kangni (*Setaria italica*) flour is used as famine food.
Ficus racemosa	Gular/Umbra	Fruits	Fruits (receptacles) are used as a vegetable and also eaten raw. The stem bark is crushed into powder and mixed with flour to prepare bread during famine.
Grewia orientalis	Gengchi	Fruits	Ripe fruits are eaten raw. Good source of vitamin C.
Iphigenia indica	Dholi Musli	Corms	Underground corms are eaten raw.
Lagenaria siceraria	Tumbo	Fruits	Fresh fruits are used as vegetable.
Leptadenia reticulata	Jhumka	Fruits	Unripe fruits are eaten raw with salt.
Leucas cephalotes	Kubhi	Leaves	Leaves are cooked as vegetable.
Madhuca indica	Mahua/ Mahuro	Flowers/Fruits	The flowers and fruits are eaten raw or cooked. The flowers are compressed into laddoos. The seeds locally called as "Dolma" are also eaten and edible oil called as "Ghee" is also extracted from them, which is used for cooking purposes. During famine the bark is boiled in water to make "Rab" and consumed locally. Special dishes are prepared of the flowers and fruits. Tribals can be seen picking the fallen ones from the ground, which keep on dribbling. They are sun-dried and stored in earthen pots. Tribals distill liquor from the fleshy corollas, which is locally called "mahuri".
Mimusops elengi	Maulsari/ Khirni	Fruits	Ripe fruits are eaten raw and also sold in the market.
Nelumbo nucifera	Kamal-Kakri	Petiole/ Rhizome/ Flower	The petiole, rhizome and flowering scape are cooked as vegetable and often sold in the market by the tribals. The seeds are also eaten raw or roasted.
Panicum miliaceum	Samlai	Grains	Grain flour is used for making bread. The grains serve as the poorman's stand-by and famine reserve.
Panicum paludosum	–	Grains	The grains are used as famine food.
Paspalidium flavidum	Kuri	Grains	The grains used as staple food by most of the tribals of the area.
Paspalum scrobiculatum	Kodra	Grains	Grains are cooked like rice. Grain flour is used for making bread. The grass is cultivated by the tribals. On fifth day of child-birth (Panchora), the newly born child is given a liquid food of pounded seeds with milk.
Prosopis cineraria	Khejra	Pods	Unripe pods are used as vegetable. They are dried and preserved for future use as vegetable. Gum is used in preparation of sweets.
Rhus mysurensis	Dansaria	Fruits	Ripe fruits are eaten raw especially by children and ladies while collecting firewood from the forests. They are dried and preserved for future consumption.
Salvadora oleioides	Pilu	Fruits	The sweet edible fruits are very much liked by the tribals. They are dried and preserved for future use also.
Setaria glauca	Kutta/Kukarva	Grains	The grains are powdered and mixed with flour of cultivated cereals to make the breads.
Setaria paniculifera	–	Grains	Grains are used as famine foods.
Tribulus terrestris	Boodiya/ Gokhru	Seeds	The seeds are powdered and mixed with the flour of grains of cultivated crops to make breads during famine. Fruits when young are sweet in taste and are eaten raw. The fruit powder is also used as remedy for urinary disorders and impotence by the tribals.
Urginea indica	Jangli kanda	Bulbs	Detoxified pieces of bulbs (after washing in water repeatedly) are used as a vegetable. In urgent need, slices are detoxified by boiling in water for some time.
Urochloa panicoides	Sanwal/Kuri	Grains	Grains are used as famine food.
Zizyphus trinervia	Jungli ber	Fruits	The ripe fruits are eaten and sold in the tirbal market.

Table 2. Ethno-medicinal plants in Rajasthan

Botanical name	Local name	Uses
Alloteropsis cimicina		Root paste is used in toothache.
Apluda mutica		Poultice of whole plant is used to cure mouth sores of cattle. It is also given to cattle with small fishes to cure flatulence.
Arundo donax		Decoction of rhizome is used to stop the secretion of milk and to increase menses.
Capillipedium heugelli		Essential oil is extracted from this grass and used for massage in rheumatism.
Cenchrus ciliaris	Dhaman	Decoction of root is given to children suffering from intestinal worms.
Cenchrus setigerus	Dhaman	Decoction of root is given to children suffering from intestinal worms.
Chloris virgata		Decoction of root is used in the treatment of cold and rheumatism.
Coix lacryma-jobi	Garelo	The seeds are boiled in water and then eaten to cure dysentry. The leaf juice is given orally in urinary complaints.
Cymbopogon martinii	Rohida	Paste of leaves is warmed with mustard oil (*Brassica campestris*) and then used in massage to relieve rheumatic pain. Oil extracted from leaves is used to cure skin diseases. Decoction of leaves is given in cold and fever. Its smoke is used as rodent and mosquito repellent.
Cynodon dactylon	Doob ghass	Aqueous extract of plant with sugar is given to persons suffering from nostril heamorrhage. Young leaves paste with sugar is used to stop bleeding from cuts and wounds. Leaf juice with a pinch of common salt is taken orally in stomachache. Decoction of whole plant is given orally to cure menstrual problem.
Dactyloctenium aegyptium	Makro	Grain powder is used to cure stomachache.
Dactyloctenium sindicum	Makro	Whole plant extract is taken orally in rheumatism.
Digitaria adscendens		Decoction of inflorescence of *Digitaria* and fruits of *Tribulus terrestris* is given to children suffering from fever.
Echinochloa crusgalli	Batda/Batti	Juice of whole plant is taken orally to cure nostril haemorrhage.
Eleusine coracana	Maduo/Mall	Grains and whole plant are used in measles, small pox pneumonia, pleuro-pneumonia, in blood diseases, in burning sensation, leprosy, skin diseases, general debility.
Panicum antidotale	Karad/Kangni	Paste of whole plant is tied over wounds.
Paspalum scrobiculatum		Paste of whole plant is used for skin diseases. It is also effective on boils and scores.
Pennisetum americanum	Bajra	Grains are employed in cold season as food to get rid of cold and sexual debility.
Phragmitis karka		The leaf juice is used for the body cooling.
Saccharum bengalense	Munj ghass	About 100 gms fresh leaves are taken and cut into small pieces. Leaves are then boiled in about 2 cups of water till it is reduced to half cup and then filtered. This filtrate is taken orally for 3 days to cure menstrual complaints. It is also a good remedy for abortion. The leaf juice is taken orally in fever.
Setaria italica	Kangni	Grains are used externally in rheumatism and as a domestic remedy for alleviating the pain of parturition. It is sedative to grauid ulcers, useful in burning sensation, in healing fracture, causes flatulence.
Sorghum helepense	Baru	Juice of whole plant is taken orally with a pinch of common salt in fever.
Themeda quadrivalvis		Paste of whole plant is warmed and used to cure the septic wounds. Small fishes moulded in this grass are used to cure flatulence in cattles especially buffaloes.
Vetiveria zizanioides	Khas	Root paste is taken orally in anthelminthic problem.
Zea mays	Makka	Juice of leaves is taken orally to cure renal disorders. The root decoction is also useful in ulcers and blood diseases.
Abrus precatorius	Chirmi	Fresh leaves are used as ingredient in cough mixtures and also chewed to cure mouth boils. During field studies it was quoted by tribals, that seeds of this plant are used as an antifertility drug both in male as well as female.

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Table 2. Contd.

Botanical name	Local name	Uses
Celastrus paniculatus	Mali/Malkangni	Seed oil is applied over scalp for promotion of hair growth. It is also applied in skin inflammations, gout and rheumatism. Infusion of bark is used in bronchitis, seeds are stimulant.
Cocculus villosus	Khangro	A jelly like material is formed by soaking the leaves in water for 24 hrs. This material is used to cause infertility in males.
Costus speciosus	Maha lakdi	Two or three drops of filtered rhizome extract is poured into ear to check pus formation and severe earache. Infusion of rhizome is taken early in the morning for about 45-50 days for the treatment of asthma. Poultice of rhizome is used in dropsy and oedema.
Curculigo orchioides	Kali moosli	Root decoction is used as a tonic for children and also to remove impotency and to check filaria.
Gloriosa superba	Kariharo/Kathari	Root paste is heated and applied on the forehead and neck for seven days to cure asthma in children. Leaf paste is applied over irritations, piles and leprosy.
Helicteris isora	Hatri/Marodfali	Root decoction is used in asthma. Infusion of fruits is used to check vomiting.
Holoarrhena antidysenterica	Koorwa/Kadwa	Latex is used for instant curding of milk. Powdered leaves and flowers are taken orally in dysentry. Root bark is crushed with stem bark of *Diospyros melanoxylon* and infusion of this mixture is taken orally in malaria.
Tinospora cordifolia	Gloya/Neemgloya	In Piles, the swollen portion of rectum is first washed with leaf extract of *'Neem' (Azadirachta indica)* and then smeared with bark paste of gloya. Stem pieces are eaten raw in rheumatism. Decoction of whole plant is considered as a wonderful medicine in hepatic diseases.
Typha angustata	Ara	Decoction of whole plant is used to cure madness.

tribal and other such communities are important sources of biodynamic compounds. Chemical and pharmacological investigations of such plants are important not only for the discovery of new therapeutic agents, but also for new sources of economic materials and precursors for the synthesis of complex chemicals of biological or industrial importance.

Primitive cultivars of wild plants used by tribal communities may hold the genetic key to many important agricultural breakthrough. Many tribal communities still continue to grow such plant species that are of great economic utility but are being threatened by changes in the style of these communities. These genetic resources have to be urgently preserved.

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